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UNITED STATES DEPARTMENT OF AGRICULTURE FOREST SERVICE RO

REPLY TO: 3430 Evaluation DATE: August 7, 1985

SUBJECT: Biological Evaluation of Lassic and Double Gate Progeny Test Sites (Report No. 85-17)

PSW FOREST AND RANGE EXPERIMENT STATION
AUG 20 1985
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TO: Forest Supervisor, Six Rivers National Forest
Attn: Freeman, W.L.

At the request of personnel in the Regional Tree Improvement Program, the Lassic and Double Gate progeny test sites on the Mad River Ranger District were evaluated by Forest Pest Management on July 31, 1985. The objective was to determine the presence of or potential for insect and disease problems which could adversely affect the objectives of the Regional Tree Improvement Program. This memo describes the sites, lists the pests observed, and discusses implications their presence may have.

LASSIC PROGENY TEST SITE

The approximately 8-acre site was logged in 1984. Removal of stumps, slash disposal, discing, and fencing are planned for completion in 1987, at which time Douglas-fir will be planted. The surrounding 100-year-old stand consists of an overstory of Douglas-fir with occasional sugar pine, ponderosa pine, madrone, and black oak. Understory is Douglas-fir, madrone and incense-cedar, with sugar and ponderosa pines in openings. Site is Forest Service Site Class 3.

Pests noted were relatively uncommon and none will affect the planted Douglas-fir. White pine blister rust (Cronartium ribicola) branch cankers were present on one sapling and one pole-sized sugar pine. Bacterial gall cankers occurred on scattered Douglas-fir saplings around the margin of the site. Western dwarf mistletoe (Arceuthobium campylopodum) on ponderosa pine and true mistletoe (Phoradendron juniperinum ssp. libocedri) on incense-cedar were present across the road from the northern boundary of the site. Pitch tubes of the turpentine beetle (Dendroctonus valens) were noted on fire-scarred butt logs of two living overstory ponderosa pines at the southwestern boundary. Armillaria mellea was common on fire-killed Douglas-fir saplings and poles in the same area. Removal of stumps should prevent any Armillaria from spreading from oak or madrone to planted seedlings. Pests that could adversely affect the planted Douglas-fir, such as Douglas-fir dwarf mistletoe

(A. douglasii) and black stain root disease (Ceratocystis wageneri) were not observed at or in the vicinity of the site.

Two notes of caution. First, the fire damaged Douglas-firs along the southwestern boundary of the site may be attractive to vectors of black stain root disease. Many black stain centers in Douglas-fir are associated with disturbed sites, presumably because the vectors of the disease, root-feeding beetles, are attracted to weakened or stressed low vigor trees. Cutting these trees now would prevent infection and any subsequent spread of the disease to trees in the plantation. Second, a root-collar weevil, Steremnius carinatus, could breed in the phloem of piled slash, stumps and roots of trees resulting from site preparation and then, as adults, move from these breeding locations to girdle seedlings. To prevent this, clearing operations should be done at least three years in advance of planting, or the slash, stumps and roots should be completely removed from the plantation site or in other ways made unsuitable for breeding such as by burning to destroy the phloem.

DOUBLE GATE PROGENY TEST SITE

The 25-acre site was logged in 1984 and will be site-preped in the same manner as Lassic. Douglas-fir and ponderosa pine will be planted in 1987. The surrounding 99-year-old stand consists primarily of Douglas-fir with some ponderosa pine, madrone, and black oak. Site is McCardle Site Index 120. The area to be planted contains scattered seedling and pole-sized Douglas-fir and patches of black oak, madrone, and tanoak which, presumably, will be removed during site preparation.

Frost damage was common and occasionally heavy on Douglas-fir seedlings and saplings within and in the vicinity of the site, indicating that the planted Douglas-fir may be exposed to this problem. True mistletoe was present on oak, but will not affect the planted conifers. No evidence of any present or potential insect and disease pests of Douglas-fir or ponderosa pine were noted.

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